



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appn. Number: 09/520,536

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Applicant: D. Ford

Examiner/ AU: Unassigned

Application Title: Apparatus and method for music production by at least two remotely located musicians

Agent Docket Number: Ford.D-01

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PETITION TO MAKE SPECIAL MPEP 708.02 (VIII)

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Commissioner for Patents
Washington, DC 20231
ATT: OFFICE OF PETITIONS

Technology Center 2600

Commissioner for Patents:

Pursuant to 37 C.F.R. Section 1.102(d) and M.P.E.P. 708.02 VIII (Accelerated Examination), Applicant hereby files this Petition in the United States Patent and Trademark Office to make special the prosecution in the above-identified case. This petition is based on the grounds that the claims in this application are believed to be drawn to a single invention, namely, a product (claims 1-19). However, if the Office determines that all claims presented are not obviously directed to a single invention, applicant will make an election, without traverse.

Applicant has conducted a pre-examination search in the following fields of search by class/subclass: 379/85-87, 90, 93, 97-99, 101, 344, 345, 387-390, 385, 187, 93, 165, 177, 419, 428, 434, 433, 436, 387, 442, 395; 370/85.1, 110.1; 375/7, 8, 36; 442; 84/671, 645; 381/80, 1, 2, 77; 370/85. The references found in this search to be most relevant to the subject were submitted concurrently with the application and are discussed below. It is pointed out with particularity, how the claimed subject matter distinguishes over these references. Based on the search results, it is applicant's opinion that all of the claims submitted in this application are allowable.

Brotz et al. US 5,398,278 describes a telephone interface system to interconnect the output of two or more musicians, one at an instant location and the other at a remote location, over communication lines, such system converting the analog musical output to digital form for duplexing over the communication lines. However, Brotz et al does not teach the use of frequency shifting, dividing and multiplexing taught in the instant invention so as to fit the full fidelity 20-20K Hz signal onto a standard copper phone line.

Nakano, et al. US 5,182,768 describes a digital telephone set connected to a digital data exchange through a transmission line. A plurality of handsets, which are mounted on a telephone body, are for converting input sounds into input analog speech signals and for converting output analog speech signals into output sounds. Connected to the handsets, a plurality of analog-to-digital converters converts the input analog speech signals into input

digital speech signals. Connected to the handsets, a plurality of digital-to-analog converters converts output digital speech signals into the output analog speech signals. On the telephone body are mounted a set of dialing keys for producing a numerical signal. Connected to the dialing keys, a control device is for producing input control data in response to the numerical signal and is for producing an output control signal in response to output control data. Connected to the transmission line, the control device, the analog-to-digital converters, and the digital-to-analog converters, a multiplexing/demultiplexing circuit is for transmitting/receiving transmission/reception time division multiplexed signals to/from the digital data exchange through the transmission line. The multiplexing/demultiplexing circuit is for multiplexing the input digital speech signals and the input control data into the transmission time division multiplexed signal and for demultiplexing the reception time division multiplexed signal into the output digital speech signals and the output control data. However, Nakano et al does not teach the use of frequency shifting, dividing and multiplexing taught in the instant invention so as to fit the full fidelity 20-20K Hz music signal onto a standard copper phone line. Rather Nakano et al deals with conversion for transmitting from a digital telephone set through a digital transmission line.

Brotz , et al. US 5,020,101 describes a musician's telephone interface that interconnects an instant location through a telephone line to a remote location such device having inputs to receive the sound from musical instruments and/or vocalization at each location with balancing circuitry and broadcast means at each location for the musicians at each location to hear the music of one another simultaneously balanced for collaboration and production of music. In this patent Brotz et al teaches a system for the same end objective but fails to teach the use of frequency shifting, dividing and multiplexing taught in the instant invention so as to fit the full fidelity 20-20K Hz signal onto a standard copper phone line.

Hoque, et al. US 4,922,536 describes in-studio, stage or field applications. High fidelity audio signals are transmitted to a remote processor in digital form in order to solve the problems of audio degradation, cross talk, ground loops and multi-cable problems associated with the analog transmission of multiple channels of audio over long distances. In one embodiment a multiplexing system is utilized with increased bandwidth and dynamic range compared to data and telephone multiplexing systems to accommodate high fidelity requirements. In an embodiment involving a distributed system, multiple MUX and DEMUX modules are coupled in a distributive fashion along a light-weight transmission line, in which each of the modules is assigned a predetermined transmission frequency and with each of the modules having a number of audio inputs which are time-multiplexed for that particular MUX module and frequency. The Subject System precludes the necessity of running multiple audio cables to remote destinations, while at the same time providing an exceptionally quiet system, since the digital data stream is extremely tolerant to cross talk, ground loops, noise, signal attenuation, and non-linearity associated with conventional analog audio transmission. Hoque et al teaches primarily the use of multiple mux and demux modules for improved signal integrity and to avoid losses in high fidelity audio signals. However, Hoque et al does not teach the use of dual copper

transmission lines with signal segregation and transformation as taught in the instant system.

The prior art teaches various apparatus which convert analog signals to digital and the reverse, as well as allowing multiplexing over phone lines. The prior art also teaches a multiplexing system with increased bandwidth and dynamic range, where a transmission occurs over lightweight coaxial cable, fiber optic or twisted-pair cable. However, the prior art does not teach an invention and method that allows transmission of signals between local and remote musicians where the transmission occurs over standard phone lines with a bandwidth of up to 20 kHz, which is nearly seven times that enabled by prior art technology. The present invention fulfills these needs and provides further related advantages as described in the following summary.

Check No. 5371 in the amount of \$130.00 to cover the required fee for this 37 C.F.R. Section 1.102(d) petition, for a small entity, is enclosed herewith. Please advise if any additional fees are required, or overpayment refund is due.

In view of the above, Applicant hereby petitions that the above-cited application be made special and advanced for examination, and applicant advised thereof.

Very respectfully,



Gene Scott, 37,930 Agent of record

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CERTIFICATION

I hereby certify that this correspondence is being deposited with the United States Postal Service as Express mail in an envelope addressed to: "Box: Fee Petition, Commissioner of Patents, Washington, DC 20231," on May 14, 2001, date of deposit.

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